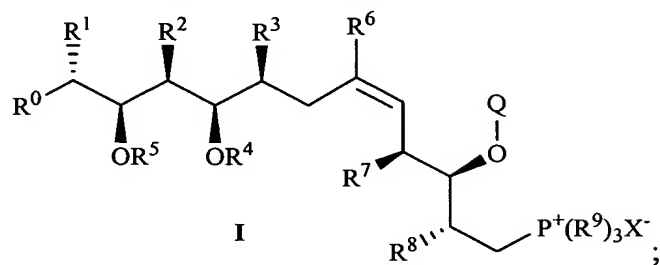


What is Claimed:

1. A process for preparing a compound of formula I:



wherein:

R^0 is C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, $(CH_2)_r(C_{3-6}$ cycloalkyl), $(CH_2)_r$ (aryl) or $(CH_2)_r$ (heterocycle), wherein r is selected from 0, 1, 2, 3, and 4;

R^1 , R^2 , R^3 , R^6 , R^7 and R^8 are independently H or C_{1-10} alkyl;

R^4 is an acid labile hydroxyl protecting group;

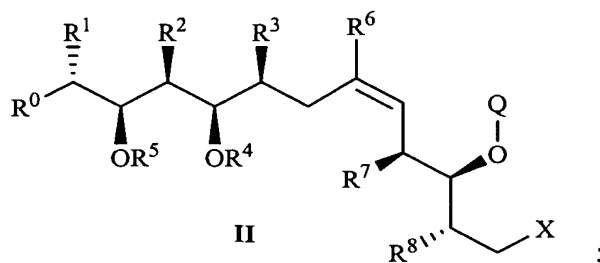
R^5 is an oxidatively labile hydroxyl protecting group;

each R^9 is independently C_{6-14} aryl;

Q is H or an acid labile hydroxyl protecting group wherein the hydroxyl protecting group has a mass of 135 Daltons or less and is unbranched at the atom bonded to the oxygen of the hydroxyl group being protected; and

X is halogen;

comprising contacting a compound of formula II:



wherein:

R^0 is C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, $(CH_2)_r(C_{3-6}$ cycloalkyl), $(CH_2)_r$ (aryl) or $(CH_2)_r$ (heterocycle), wherein r is selected from 0, 1, 2, 3, and 4;

R^1 , R^2 , R^3 , R^6 , R^7 and R^8 are independently H or C_{1-10} alkyl;

R^4 is an acid labile hydroxyl protecting group;

R^5 is an oxidatively labile hydroxyl protecting group;

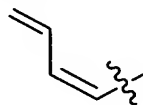
Q is H or an acid labile hydroxyl protecting group wherein the hydroxyl protecting group has a mass of 135 Daltons or less and is unbranched at the atom bonded to the oxygen of the hydroxyl group being protected; and

X is halogen;

at a pressure of less than about 10,000 psi with a phosphine of formula $P(R^9)_3$ wherein each R^9 is independently C_{6-14} aryl;

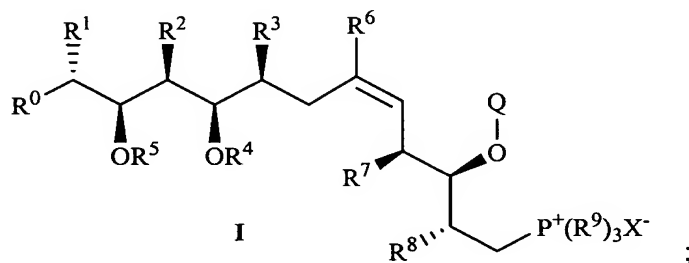
for a time and under conditions sufficient to prepare the compound of formula I.

2. A process according to claim 1 wherein Q is methoxymethyl, methylthiomethyl, 2-methoxyethoxymethyl, acetyl, benzyloxymethyl, 2-(trimethylsilyl)ethoxymethyl or allyl.
3. A process according to claim 2 wherein Q is methoxymethyl.
4. A process according to claim 1 wherein the X moiety of the compound of formula II is iodo.
5. A process according to claim 1 further comprising a base.
6. A process according to claim 5 wherein the base is non-nucleophilic.
7. A process according to claim 6 wherein the base is isopropyldiethylamine.
8. A process according to claim 1 wherein the reaction is carried out at essentially atmospheric pressure.
9. A process according to claim 1 wherein R^0 is alkenyl.
10. A process according to claim 9 wherein R^0 is:



11. A process according to claim 1 wherein R^1 , R^2 , R^3 , R^6 , R^7 and R^8 are independently H or C_{1-3} alkyl.

12. A process according to claim 1 wherein R^1 , R^2 , R^7 and R^8 are methyl and R^3 and R^6 are each independently H or methyl.
13. A process according to claim 1 wherein R^1 , R^2 , R^3 , R^6 , R^7 and R^8 are methyl.
14. A process according to claim 1 wherein R^1 , R^2 , R^3 , R^7 and R^8 are methyl and R^6 is H.
15. A process according to claim 1 wherein the reaction temperature is in the range of about 0 to about 200°C.
16. A process according to claim 15 wherein the reaction temperature is in the range of about 20 to about 140°C.
17. A process according to claim 1 wherein the reaction pressure is in the range from about ambient to about 10,000 psi.
18. A process according to claim 17 wherein the reaction pressure is essentially ambient.
19. A process according to claim 1 wherein at least one of R^9 is phenyl.
20. A process according to claim 1 wherein R^5 is *para*-methoxybenzyl.
21. A process according to claim 1 wherein R^4 is $(R^{16})_3Si-$, and wherein each R^{16} is independently C_{1-6} alkyl.
22. A process according to claim 21 wherein R^4 is tert-butyldimethylsilyl.
23. A compound of the formula I:



wherein:

R^0 is C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, $(CH_2)_r(C_{3-6}$ cycloalkyl), $(CH_2)_r(aryl)$ or $(CH_2)_r(heterocycle)$, wherein r is selected from 0, 1, 2, 3, and 4;

R^1 , R^2 , R^3 , R^6 , R^7 and R^8 are independently H or C_{1-10} alkyl;

R^4 is an acid labile hydroxyl protecting group;

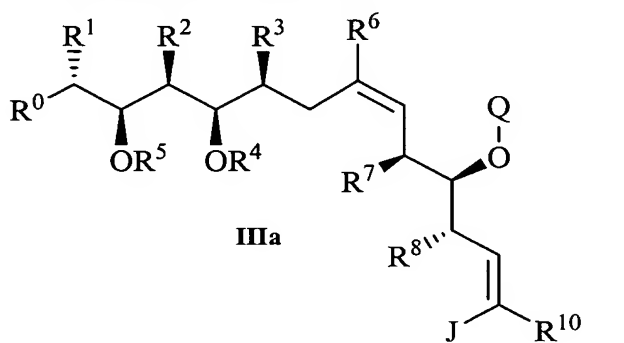
R^5 is an oxidatively labile hydroxyl protecting group;

each R^9 is independently C_{6-14} aryl;

Q is H or an acid labile hydroxyl protecting group wherein the hydroxyl protecting group has a mass of 135 Daltons or less and is unbranched at the atom bonded to the oxygen of the hydroxyl group being protected; and

X is halogen.

24. A process for preparing a compound of formula IIIa:



wherein:

R^0 is C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, $(CH_2)_r(C_{3-6}$ cycloalkyl), $(CH_2)_r(aryl)$ or $(CH_2)_r(heterocycle)$, wherein r is selected from 0, 1, 2, 3, and 4;

R^1 , R^2 , R^3 , R^6 , R^7 and R^8 are independently H or C_{1-10} alkyl;

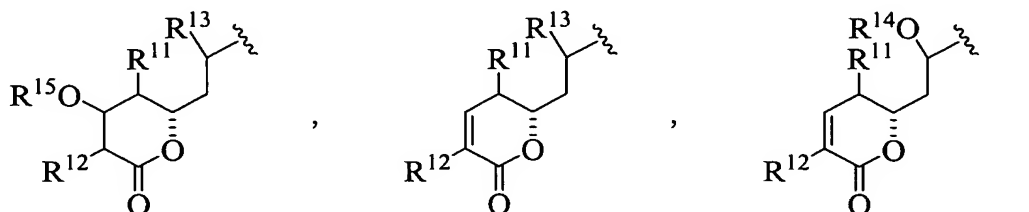
R^4 is an acid labile hydroxyl protecting group;

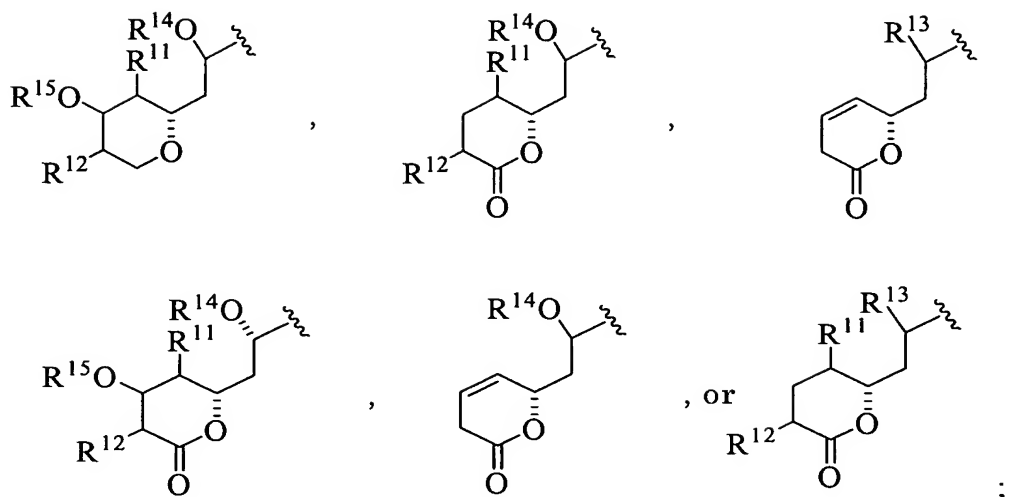
R^5 is an oxidatively labile hydroxyl protecting group;

R^{10} is H or C_1 - C_6 alkyl;

Q is H or an acid labile hydroxyl protecting group wherein the hydroxyl protecting group has a mass of 135 Daltons or less and is unbranched at the atom bonded to the oxygen of the hydroxyl group being protected; and

J is:



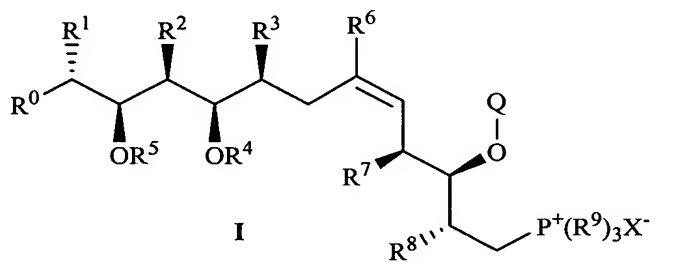


wherein:

R^{11} , R^{12} and R^{13} are each independently H or C_1 - C_{10} alkyl; and

R^{14} and R^{15} are each independently H or an acid labile hydroxyl protecting group;

comprising contacting a compound of formula I:



wherein:

R^0 is C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, $(CH_2)_r(C_{3-6}$ cycloalkyl), $(CH_2)_r$ (aryl) or $(CH_2)_r$ (heterocycle), wherein r is selected from 0, 1, 2, 3, and 4;

R^1 , R^2 , R^3 , R^6 , R^7 and R^8 are independently H or C_{1-10} alkyl;

R^4 is an acid labile hydroxyl protecting group;

R^5 is an oxidatively labile hydroxyl protecting group;

Q is H or an acid labile hydroxyl protecting group wherein the hydroxyl protecting group has a mass of 135 Daltons or less and is unbranched at the atom bonded to the oxygen of the hydroxyl group being protected;

each R^9 is independently C_{6-14} aryl; and

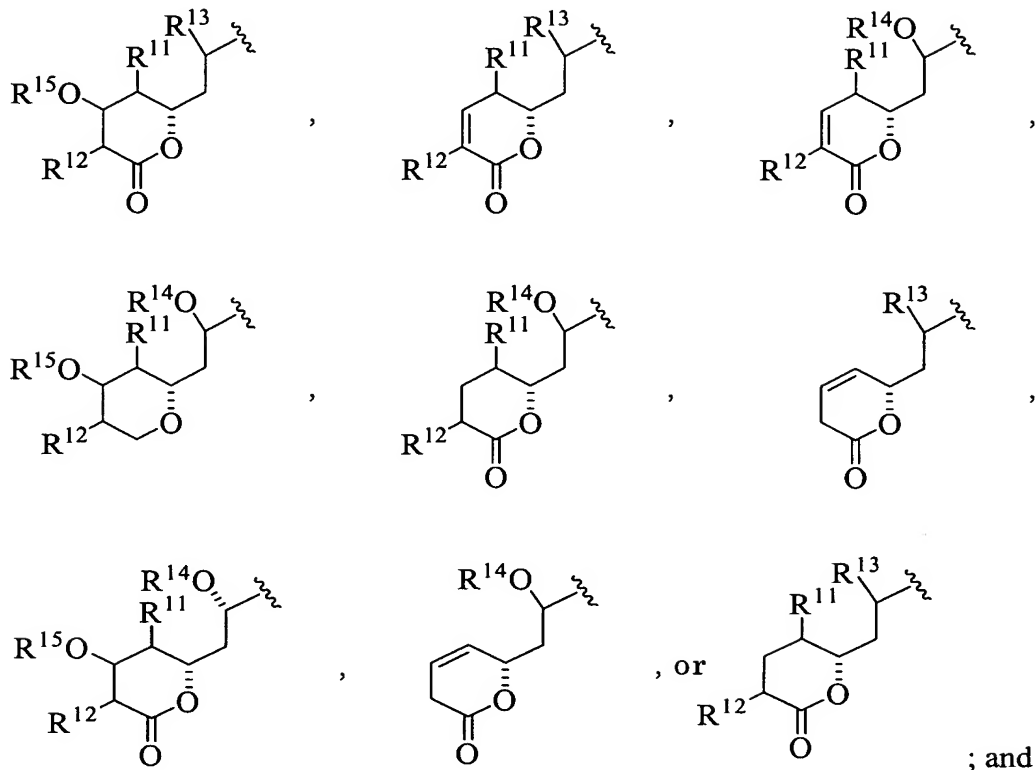
X is halogen;

with a compound of formula $J-C(=O)R^{10}$,

wherein:

R^{10} is H or C_1 - C_6 alkyl; and

J is:



wherein:

R^{11} , R^{12} , R^{13} and R^{16} are each independently H or C_1 - C_{10} alkyl; and

R^{14} and R^{15} are each independently H or an acid labile hydroxyl protecting group;

in the presence of a base for a time and under conditions sufficient to prepare the compound of formula IIIa.

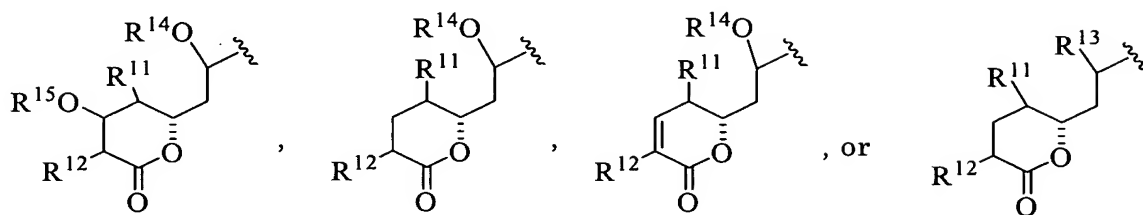
25. A process according to claim 24, wherein at least one of R^{14} and R^{15} is other than H.

26. A process according to claim 24, wherein the reaction is carried out at a temperature in the range of about -30 to about -78°C .

27. A process according to claim 24, wherein the reaction is carried out at a temperature of about -78°C .

28. A process according to claim 24, wherein R^{10} is H.

29. A process according to claim 24 wherein J is:

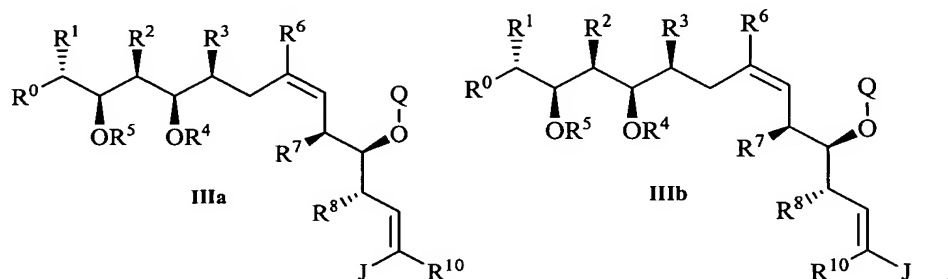


30. A process according to claim 24, wherein the base is NaHMDS, LiHMDS, KHMDS, MeLi-LiBr complex, n-BuLi (with or without HMPA), KOtBu or NaH.

31. A process according to claim 30, wherein the base is CH_3Li-CH_3Br complex.

32. A process according to claim 24, wherein the ratio of the compound of formula IIIa to a by-product compound of formula IIIb is at least about 4;

wherein the compounds of formula IIIa and IIIb have the structures:



33. A process according to claim 32, wherein the ratio of the compound of formula IIIa to the by-product compound of formula IIIb is at least about 10.